

- salar*) into Norwegian rivers threaten natural populations. *Canadian Journal of Fisheries and Aquatic Sciences* 48: 426–428.
- Freitag, S., & Robinson, T.J. 1993. Phylogenetic patterns in mitochondrial DNA of the Ostrich (*Struthio camelus*). *Auk* 110: 614–622.
- Parker, A. 1992. *Introducing Ostriches to Kenya Farmers*. Alternative (Animal) Products Ltd., Nairobi.
- Peterson, A.T. & Brisbin Jr., I.L. 1999. Genetic endangerment of wild red junglefowl (*Gallus gallus*). *Bird Conservation International* 9: 387–394.
- Roberge, C., Normandeau, E., Einum, S., Guderley, H. & Bernatchez, L. 2008. Genetic consequences of interbreeding between farmed and wild Atlantic salmon: insights from the transcriptome. *Molecular Ecology* 17: 314–324.
- Whelan, R.J., Roberts, D.G., England, P.R. & Ayre, D.J. 2006. The potential for genetic contamination vs. augmentation by native plants in urban gardens. *Biological Conservation* 128: 493–500.
- Zimmerman, D.A., Turner, D.A. & Pearson, D.J. 1996. *Birds of Kenya and Northern Tanzania*. A & C Black. London.

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Comments concerning the status of the White-bellied Bustard race *Eupodotis senegalensis erlangeri*

Much confusion has existed concerning the status of the *Eupodotis senegalensis erlangeri* race of the White-bellied Bustard, originally named by Reichenow (1905) in his *Die Vogel Afrikas*, and its subsequent treatment by later authorities.

Erlanger (1905) concluded that there were two distinct races of *E. canicollis*: a northern rufescent one, and a southern paler form. He considered the type of *canicollis* from Bardera, Juba River, southern Somalia as the southern bird, and named the northern one *Otis canicollis somaliensis* from Gallaland (actually near Harrar, Ethiopia). Shortly afterwards Reichenow (1905) utterly confused the issue by mistaking Bardera in South Somalia for Berbera in North Somalia. He felt the type of *canicollis* (from Bardera) was in fact the northern form and therefore Erlanger's *somaliensis* was simply a synonym. He then named southern birds *erlangeri* as occurring from Machakos to Iringa in Kenya, probably after seeing specimens collected by Sir Frederick Jackson from Machakos, as well as others from Tanganyika collected by various fellow German collectors. Neumann (1907) corrected Reichenow's error and showed that *erlangeri* was no more than a synonym of *canicollis*, while Erlanger's *somaliensis* was indeed distinct. Zedlitz (1914), Sclater (1924) and Friedmann (1930) subsequently confirmed this arrangement. Later however, Grant & Mackworth-Praed (1935) re-muddied the waters by concluding (wrongly) that *canicollis* and Erlanger's *somaliensis* were indistinguishable, while birds from southwestern Kenya and central Tanganyika were darker and less tawny, and so attributed these as *erlangeri*. While this arrangement was not

followed by Jackson & Sclater (1938), it was adopted by White (1965), Britton (1980), Urban *et al.* (1986) and Dickinson (2003). However Zimmerman *et al.* (1996) treated birds in Kenya & northern Tanzania as *canicollis*, but without any further comment.

Paul Goriup (*pers. comm.*) recently confirmed that the type of *E. canicollis* held in Paris had been critically examined. This exercise indicated that two forms could indeed be distinguished: one rather pale with a rufous tone, and the other rather dark with a brown tone. The difference between the two can be traced chiefly to the degree of barring, a feature particularly apparent on the tertials, which can range from strongly barred to lightly vermiculated. This feature, however, is also a function of age. Juveniles have barred tertials while adults have vermiculated ones, with intermediate forms occurring during moult. In fact, the type specimen itself is just such an intermediate, exhibiting both types of tertial patterning. It seems probable that Erlanger's birds (collected in May) were breeding adults, while those examined by Grant & Mackworth-Praed in the British Museum collection were mostly juveniles or non-breeding adults of a single form. If this was the case, it would therefore appear that while *canicollis* may exhibit some colour variations within its range from north to south, and east to west, they are too gradual to warrant any subspecific separation.

As such the East and northeastern African populations of *Eupodotis senegalensis* can best be summarised as follows:

- *E. s. senegalensis* (Vieillot, 1820): West Africa to Central Sudan, NW Ethiopia and Eritrea
- *E. s. canicollis* (Reichenow, 1881): Ethiopia and Somalia south to NE Uganda, Kenya and Tanzania (includes *erlangeri*, *somaliensis* and *parva*)
- Two additional races *mackenziei* and *barrowii* occur throughout much of central and southern Africa.

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References

- Britton, P.L. (Ed.). 1980. *Birds of East Africa, their habitat, status & distribution*. EANHS. Nairobi.
- Dickinson, E.C. (Ed.). 2003. *The Howard & Moore Complete Checklist of the Birds of the World*. Third Edition. Christopher Helm. London.
- Erlanger, C.F. von. 1905. *Beitrage zur Vogelfauna Nordostafrikas*. *J. Orn.* 53:84.
- Friedmann, H. 1930. *Birds Collected by the Childs Frick Expedition to Ethiopia and Kenya Colony*. Part 1, Non-Passerres. US Nat. Mus. Bull. 153, Smithsonian Inst, Washington, D.C.
- Grant, C.H.B. & Mackworth-Praed, C.W. 1935. On the Eastern African Races of *Eupodotis senegalensis* (Vieillot). *BBOC* 55: 89-91.
- Jackson, F.J.J. & Sclater, W.L. 1938. *The Birds of Kenya Colony and the Uganda Protectorate*. Gurney and Jackson. London.
- Neumann, O. 1907. *Über einige afrikanische Trappen*. *J.Orn* 55:307.
- Reichenow, A. 1905. *Die Vogel Afrikas* Vol. 3: 802.

- Sclater, W.L. 1924. *Systema Avium Aethiopicarum*. Part 1. London.
- Urban, E.K., Fry, C.H. & Keith, S. (Eds.). 1986. *The Birds of Africa*. Vol. 2. London. Academic Press.
- White, C.M.N. 1965. *A Revised Check List of African Non-Passerine Birds*. Govt Printer. Lusaka.
- Zedlitz, O.G. 1914. *Das Sud-Somaliland als zoogeographisches Gebiet. Eine ornithologische Studie*. *J. Orn.* 63: 633-634.
- Zimmerman, D.A., Turner, D.A. & Pearson, D.J. 1996. *Birds of Kenya and northern Tanzania*. London, UK: A&C Black.

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Typical Little Egrets *Egretta garzetta* mix with Dimorphic Egrets *Egretta dimorpha* on open coast in Tanzania

Summary

A mixed flock of Little and Dimorphic Egrets (*Egretta garzetta* and *Egretta dimorpha*, respectively) observed on a coral reef in southern Tanzania in August suggests that the Little Egret might occur on East African open coast more often than currently thought. One reason for this could be that the migrants join the resident Dimorphic Egret population. Examination of photographs for the subtle morphological differences between the two forms also suggests the occurrence of hybrids, which somewhat lends support to the idea of one species for the taxonomically controversial, Little-Egret-like birds that occur in Africa.

The Little Egret-like birds that occur in Africa are taxonomically very controversial (Hancock & Kushlan 1984; see a related article in this *Scopus* issue). They are variously ascribed to four forms in the genus *Egretta*: *garzetta* (the typical Little Egret), *gularis* (Western Reef Heron, western race), *schistacea* (Western Reef Heron, eastern race), and *dimorpha* (Dimorphic or Mascarene Egret). These taxa are also sometimes considered as species or subspecies; indeed, considerable morphological variability exists among assumed representatives of the same form (see Turner 2010). The existence of intermediate phenotypes, as well as occurrence of mixed pairs, e.g., *garzetta* with *gularis* and *garzetta* with *schistacea* (Hancock & Kushlan 1984, p. 132), suggests a case of interbreeding races within one species. Moreover, the assumed differences in geographical range, with *garzetta* being mainly inland and *gularis*, *schistacea*, and *dimorpha* mainly coastal, have been challenged by the finding of *schistacea* mixed with *garzetta* at Lake Turkana in Kenya's interior, besides individuals that looked like typical *garzetta* mixed with